Claims.

1.   A method of analysing a biological sample of interest, comprising:

(i)   providing a probe library which comprises cDNA or a derivative thereof representative of a pattern of multiple gene expression in the biological sample of interest;

(ii)   providing a plurality of individual reference samples each being a library comprised of cDNA or a derivative thereof representative of a pattern of gene expression in reference biological samples from which the reference samples have been derived;

(iii)   treating individual reference samples with the probe library under hybridising conditions; and

(iv)   determining the relative degree of hybridisation of the probe library to the reference samples, thereby providing an indication of the degree of similarity between gene expression in the biological sample of interest and gene expression in the individual reference biological samples.

2.   A method according to claim 1, wherein the reference samples are provided as an array on a substrate.

3.   A method according to claim 1 or claim 2, wherein the reference samples comprise cDNA or a derivative thereof derived from biological reference samples representing a number of different biological conditions or states.

4.   A method according to claim 1, claim 2 or claim 3, wherein the reference samples comprise cDNA or a derivative thereof derived from biological reference samples representing a number of different examples of the same biological condition or state.

5.   A method according to any one of claims 1 to 4, wherein the probe library is prepared by a complexity reduction technique from cDNA obtained from the biological sample of interest.

6.   A method according to any one of claims 1 to 5, wherein the reference samples are prepared by a complexity reduction technique from cDNA obtained from the reference biological samples.

7.   A method as claimed in claim 5 or claim 6, wherein the complexity reduction technique comprises a restriction digestion technique.

8.   A method as claimed in claim 5 or claim 6, wherein the complexity reduction technique comprises a subtraction technique.

9.   A method as claimed in claim 5 or claim 6, wherein the complexity reduction technique comprises a cDNA display technique.

10.   A method as claimed in any one of claims 1 to 9, wherein the hybridisation is effected in the presence of competitor DNA.

11.   A method according to any preceding claim, wherein the probe library is labelled with a fluorophore in order to determine the relative degree of hybridisation of the probe library to the reference samples.

12.   A method according to any preceding claim, wherein the probe library or reference samples are subject to partial exonuclease digestion prior to effecting hybridisation.

13.   A method according to claim 12, wherein both the probe library and the reference samples are subject to partial exonuclease digestion prior to effecting hybridisation, and the probe library and reference samples are treated with exonucleases having different specificities.

14.   A method according to claim 1, wherein the probe library and/or reference samples comprise a cDNA derivative and said derivative is RNA.

15.   A collection of individual reference samples each being a library comprised of cDNA or a derivative thereof representative of a pattern of gene expression in reference biological samples from which the reference samples have been derived.

16.   A collection of individual reference samples as claimed in claim 15, wherein the reference samples comprise cDNA or a derivative thereof derived from biological reference samples representing a number of different examples of the same biological condition or state.

17.   A collection of individual reference samples as claimed in claim 15 or claim 16, wherein the reference samples are prepared by a complexity reduction technique from cDNA obtained from reference biological samples.

18.   A collection of individual reference samples as claimed in claim 17, wherein the complexity reduction technique comprises a restriction digestion technique.

19.   A collection of individual reference samples as claimed in claim 17, wherein the complexity reduction technique comprises a subtraction technique.

20.   A collection of individual reference samples as claimed in claim 17, wherein the complexity reduction technique comprises a cDNA display technique.

21.   An array or microarray that comprises a collection of reference samples as claimed in any one of claims 15 to 20.